

## Cataphora

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Cataphora is the term used for backward anaphora (→ anaphora): coreference between a referential expression and a pronoun which *precedes* it, as illustrated in

(1).

(1a) כאשר הוא יושב מול המחשב, דני מאושר

*ka'ašer hu yošev mul ha-maxšev, dani me'ušar*

‘When he sits in front of the computer, Dani is happy.’

(1b) הספר שהוא כתב הקנה לדני פרסום רב

*ha-sefer še-hu katav hiqna le-dani pirsum rav*

‘The book he wrote brought to Dani a lot of publicity.’

(1c) הסטודנטים שלומדים אתן ארגנו לדני מסיבת הפתעה

*ha-študentim še-lomdim 'ito 'irgenu le-dani mesibat hafta'a*

‘The students who study with him organized for Dani a surprise party.’

(1d) החשדות נגדן מאד פגעו בדני

*ha-ḥašadot negdo me'od pag'u be-dani*

‘The suspicions against him were very hurtful to Dani.’

(1e) התמונה שלן בעיתון מילאה את דני בגאווה

*ha-tmuna šelo ba-'iton mil'a 'et dani be-ga'ava*

‘His picture in the newspaper filled Dani with pride.’

In all the sentences in (1), the pronoun corefers with the referential expression *dani*, though preceding it. In these examples, it would be possible to replace cataphora with anaphora, by reversing the order, so that the pronoun follows *dani*. Irrespective of word-order, the referential expression is called *the antecedent* of the coreferring pronoun.

(2a) כאשר דני יושב מול המחשב, הוא מאושר

*ka'ašer dani yošev mul ha-maxšev, hu me'ušar*

'When Dani sits in front of the computer, he is happy.'

(2b) הספר שדני כתב הקנה לו פרסום רב

*ha-sefer še-dani katav hiqna lo pirsum rav*

'The book Dani wrote brought him a lot of publicity.'

(2c) הסטודנטים שלומדים עם דני ארגנו לו מסיבת הפתעה

*ha-šudentim še-lomdim 'im dani 'irgenu lo mesibat hafta'a*

'The students who study with Dani organized him a surprise party.'

(2d) החשדות נגד דני מאד פגעו בו

*ha-xašadot neged dani me'od pag'u bo*

'The suspicions against Dani were very hurtful to him.'

(2e) התמונה של דני בעיתון מילאה אותו בגאווה

*ha-tmuna šel dani ba-'iton mil'a 'oto be-ga'ava*

'Dani's picture in the newspaper filled him with pride.'

The converse certainly does not hold, as it is usually impossible to replace a given case of anaphora with the corresponding cataphora. In the examples of anaphora in (3) below, when the antecedent–pronoun order is reversed, as in (4), coreference is no longer possible. In (3), the pronoun is anaphoric to the preceding antecedent *dani*, but when the order is reversed in (4), the pronoun can only be interpreted as disjoint in reference from *dani*:

(3a) דני מאושר כאשר הוא יושב מול המחשב

*dani me'ušar ka'ašer hu yošev mul ha-maxšev*

'Dani is happy when he sits in front of the computer.'

(3b) את הפרסום הרב הקנה לדני הספר שהוא כתב

*'et ha-pirsum ha-rav hiqna le-dani ha-sefer še-hu katav*

‘The great publicity was brought to Dani by the book he wrote.’

(3c) את מסיבת ההפתעה ארגנו לדני הסטודנטים שלומדים אתו

*'et mesibat ha-hafta'a 'irgenu le-dani ha-s'tudentim še-lomdim 'ito*

‘The surprise party was organized for Dani by the students who study with him.’

(3d) מאד פגעו בדני החשדות נגדו

*me'od pag'u be-dani ha-xašadot negdo*

‘What was very hurtful to Dani were the suspicions against him.’

(3e) גאווה רבה מילאה את דני למראה התמונה שלן בעיתון

*ga'ava raba mil'a 'et dani le-mar'e ha-tmuna šelo ba-’iton*

‘A lot of pride filled Dani at the sight of his picture in the newspaper.’

(4a) הוא מאושר כאשר דני יושב מול המחשב

*hu me'ušar ka'ašer dani yošev mul ha-maxšev*

‘He is happy when Dani sits in front of the computer.’

(4b) את הפרסום הרב הקנה לו הספר שדני כתב

*'et ha-pirsum ha-rav hiqna lo ha-sefer še-dani katav*

‘The big publicity was brought to him by the book that Dani wrote.’

(4c) את מסיבת ההפתעה ארגנו לו הסטודנטים שלומדים עם דני

*'et mesibat ha-hafta'a 'irgenu lo ha-s'tudentim še-lomdim 'im dani*

‘The surprise party was organized for him by the students who study with Dani.’

(4d) מאד פגעו בו החשדות נגד דני

*me'od pag'u bo ha-xašadot neged dani*

‘What was very hurtful to him were the suspicions against Dani.’

(4e) גאווה רבה מילאה אותו למראה התמונה של דני בעיתון

*ga'ava raba mil'a 'oto le-mar'e ha-tmuna šel dani ba-'iton*

'A lot of pride filled him at the sight of Dani's picture in the newspaper.'

The examples so far may seem to imply that cataphora is a phenomenon more restrictive than anaphora: wherever cataphora is allowed, then so is anaphora, whereas there are constructions where anaphora is allowed but cataphora is not. Yet this would be a premature conclusion. There exist examples where cataphora is allowed but anaphora is not. In the examples of cataphora in (5), the pronoun is coreferential with the antecedent *dani*, but when the order is reversed in (6), where *dani* precedes the pronoun, anaphora becomes impossible and disjointness ensues:

(5a) מול המחשב שלן דני יושב שעות

*mul ha-maxšev šelo dani yošev ša'ot*

'In front of his computer Dani sits for hours.'

(5b) מהפרסום הרב שלן דני מאד חשש

*me-ha-pirsum ha-rav šelo dani me'od xšaš*

'Of his big publicity Dani was very wary.'

(5c) את המסיבה שלן דני ארגן ברגע האחרון

*'et ha-mesiba šelo dani 'irgen ba-rega' ha-'axaron*

'His party Dani organized at the last moment.'

(5d) לחשדות נגדן דני לא היה ער

*la-xšašadot negdo dani lo haya 'er*

'Of the suspicions against him Dani was not aware.'

(5e) את הסיפורים עליו בעיתון דני ראה רק למחרת

*'et ha-sipurim 'alay ba-'iton dani ra'a raq le-moxorat*

'The stories about him in the newspaper Dani saw only the following day.'

(6a) מול המחשב של דני הוא יושב שעות

*mul ha-maxšev šel dani hu yošev ša'ot*

'In front of Dani's computer he sits for hours.'

(6b) מהפרסום הרב של דני הוא מאד חשש

*me-ha-pirsum ha-rav šel dani hu me'od xšaš*

'Of Dani's big publicity he was very wary.'

(6c) את המסיבה של דני הוא ארגן ברגע האחרון

*'et ha-mesiba šel dani hu 'irgen ba-rega' ha-'axaron*

'Dani's party he organized at the last moment.'

(6d) לחשדות נגד דני הוא לא היה ער

*la-xšađot neged dani hu lo haya 'er*

'Of the suspicions against Dani he was not aware.'

(6e) את הסיפורים על דני בעיתון הוא ראה רק למחרת

*'et ha-sipurim 'al dani ba-'iton hu ra'a raq le-moxorat*

'The stories about Dani in the newspaper he only saw the following day.'

Early on in the development of theoretical linguistics, facts such as these, reproducible in other languages as well, led to the conclusion that the crucial considerations in determining coreference are not the distinctions between anaphora and cataphora, i.e., considerations of word-order, but rather considerations of hierarchical constituent structure and the structural relationship of c(onstituent)-command, which, roughly, is the relationship between a constituent and all the parts of its immediately adjacent constituents. Reinhart (1983) showed that c-command restricts coreference: a pronoun may not be coreferential with an antecedent it c-commands, irrespective of whether the antecedent precedes or follows it. Since a pronoun attached to a verb c-commands all the sub-constituents of the verb's complement, none of these sub-constituents can be antecedent of the pronoun. For

example, the pronouns in (4a) and in all the sentences in (6) are attached to the respective verbs as subjects, in (4b–d) as indirect objects, and in (4e) as direct object. In all these cases they cannot have an antecedent within the verb’s complement, irrespective of word-order. In the parallel examples in (2), the antecedent is not part of the verb’s complement, but of an adjunct in (2a) and subject in (2b–d); coreference is accordingly possible. In (1), (3), and (5) the pronoun is not attached to the main verb, and thus does not c-command the antecedent; this allows coreference irrespective of word-order.

To conclude, a note of terminological clarification: examples of agreement between possessor and possessee, such as in (7) below, have often been called cataphora in the literature on earlier stages of Hebrew, since the pronoun-like element attached to the possessee agrees in person, gender, and number with the possessor that follows it.

(7) מִטָּתוֹ שֶׁלִּשְׁלֹמֹה (Cant. 3.7)

*mittāṭō šellišlōmō*

‘the bed of Solomon’ (literally ‘bed-his of Solomon’)

Yet (7) is an example of agreement (Engelhardt 2000, or ‘clitic-doubling’ in the terminology of Borer 1983), which is orthogonal to the issue of coreferentiality at stake in cataphora and anaphora. While coreferentiality is an optional interpretive process, agreement is an obligatorily requirement of syntax: in examples (1)–(6) above, the pronoun may freely refer to someone other than Dani in each one of the examples, but in (7) it must refer to Solomon. Thus cataphora is unrelated to agreement, and, similarly, also to apposition and dislocation.

*References*

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